

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P838500

Luminaire Tested: HCSQ630D010-HM63040830-61SQH

Issue Date: 5/21/2024

**Test Information**

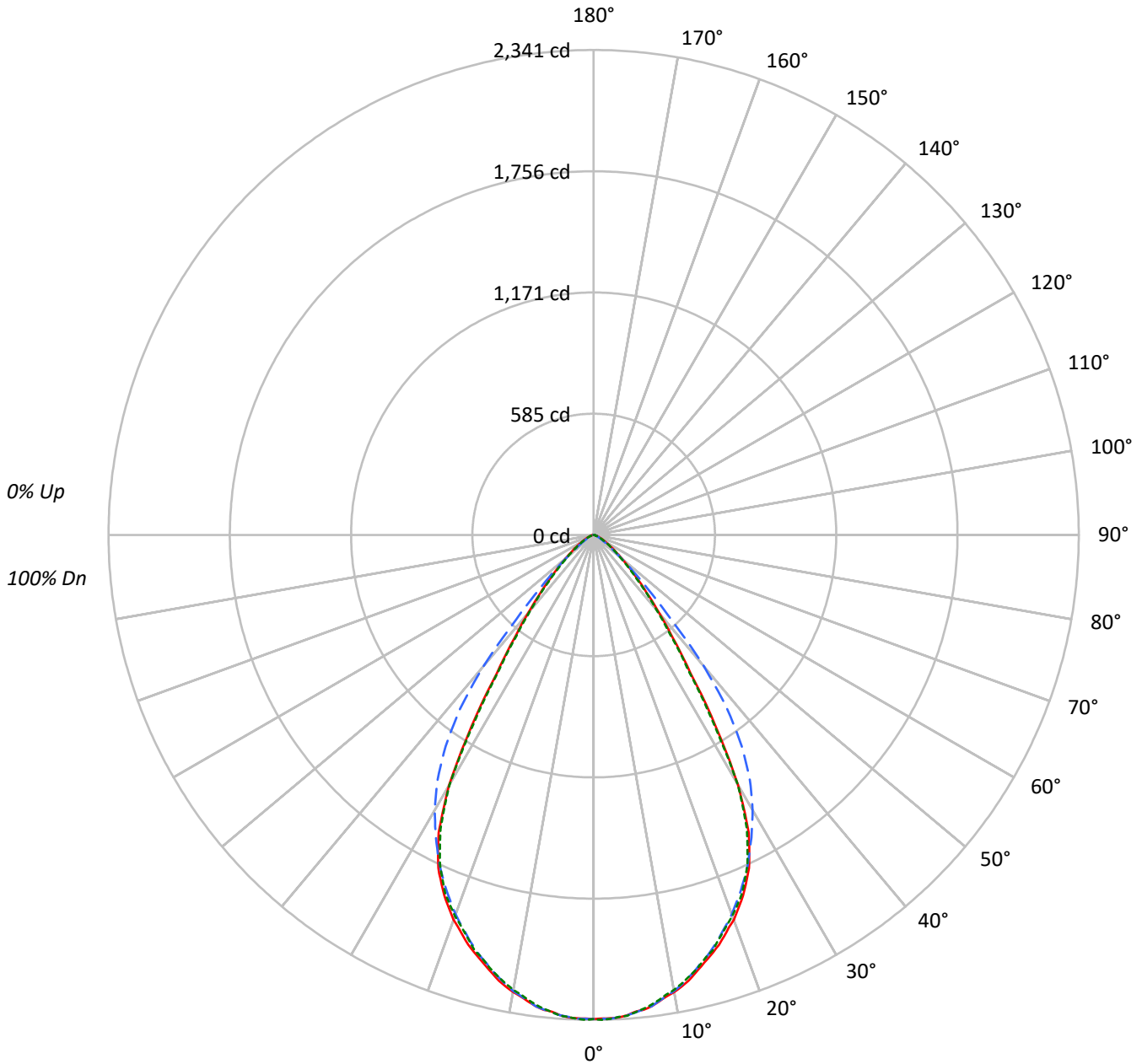
Test Method: LM-79-2019  
Report Number: P838500  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040830-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2628.8 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92								
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85								
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78								
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71								
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66								
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61								
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56								
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52								
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48								
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	100638	100638	100638
5°	99843	100011	99955
10°	97937	97714	97487
15°	94480	93959	93901
20°	90584	89278	89690
25°	84310	83574	83388
30°	69285	76245	69091
35°	42790	65481	41770
40°	27467	46414	26523
45°	17920	22499	17049
50°	11896	11200	11112
55°	8077	5840	7492
60°	5468	3574	5020
65°	3831	2639	3433
70°	2442	1964	2279
75°	1730	1514	1514
80°	1289	967	967
85°	642	1284	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 22499 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	218.3	8.3
10°-20°	592.5	22.5
20°-30°	799.8	30.4
30°-40°	624.2	23.7
40°-50°	261.5	9.9
50°-60°	88.6	3.4
60°-70°	31.6	1.2
70°-80°	10.3	0.4
80°-90°	2.1	0.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1610.5	61.3
0°-40°	2234.7	85.0
0°-60°	2584.8	98.3
0°-90°	2628.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2628.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2337	2337	2337	2337	2337	
5°	2310	2313	2314	2310	2313	218
15°	2120	2114	2108	2105	2107	596
25°	1775	1767	1759	1759	1755	798
35°	814	955	1246	954	795	535
45°	294	315	370	301	280	236
55°	108	98	78	93	100	99
65°	38	31	26	30	34	39
75°	10	9	9	9	9	11
85°	1	1	3	1	1	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2337.4	2337.4	2337.4	2337.4	2337.4
1°	2334.8	2338.7	2336.1	2337.4	2341.3
2°	2334.8	2334.8	2337.4	2336.1	2337.4
3°	2332.2	2332.2	2329.6	2329.6	2329.6
4°	2324.4	2324.4	2324.4	2321.8	2327.0
5°	2310.1	2312.7	2314.0	2310.1	2312.7
6°	2305.0	2306.3	2303.7	2302.4	2299.8
7°	2293.3	2289.4	2293.3	2284.2	2285.5
8°	2273.8	2273.8	2271.3	2268.7	2266.1
9°	2255.7	2255.7	2253.1	2249.2	2246.6
10°	2240.1	2236.2	2235.0	2231.1	2229.8
11°	2222.0	2214.2	2212.9	2209.0	2209.0
12°	2200.0	2196.1	2187.0	2185.7	2185.7
13°	2172.7	2168.8	2162.4	2157.2	2162.4
14°	2146.8	2144.2	2132.5	2136.4	2135.1
15°	2119.6	2114.4	2107.9	2105.3	2106.6
16°	2094.9	2085.9	2076.8	2078.1	2085.9
17°	2069.0	2056.1	2047.0	2045.7	2049.6
18°	2036.6	2026.2	2012.0	2017.2	2017.2
19°	2004.2	1989.9	1980.9	1979.6	1984.8
20°	1977.0	1954.9	1948.5	1947.2	1957.5
22.5°	1883.6	1861.6	1856.4	1861.6	1872.0
25°	1774.7	1767.0	1759.2	1759.2	1755.3
27.5°	1620.5	1638.6	1647.7	1629.5	1599.7
30°	1393.6	1470.1	1533.6	1461.0	1389.7
32.5°	1098.0	1256.2	1402.7	1252.3	1072.1
35°	814.1	955.4	1245.8	954.1	794.7
37.5°	627.4	718.2	1059.1	706.5	609.3
40°	488.7	541.9	825.8	535.4	471.9
42.5°	379.8	413.5	549.7	405.8	366.9
45°	294.3	315.0	369.5	300.8	280.0
47.5°	229.5	238.5	252.8	228.2	216.5
50°	177.6	177.6	167.2	171.1	165.9
52.5°	137.4	132.2	112.8	124.5	127.0
55°	107.6	98.5	77.8	93.3	99.8
57.5°	81.7	72.6	55.7	68.7	75.2
60°	63.5	54.4	41.5	51.9	58.3
62.5°	49.3	41.5	32.4	38.9	44.1
65°	37.6	31.1	25.9	29.8	33.7
67.5°	28.5	23.3	19.4	22.0	25.9
70°	19.4	18.1	15.6	16.9	18.1
72.5°	14.3	13.0	11.7	11.7	13.0
75°	10.4	9.1	9.1	9.1	9.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	2.6	2.6	2.6	2.6	2.6
85°	1.3	1.3	2.6	1.3	1.3
87.5°	1.3	1.3	1.3	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°

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Scaled Data Report





77.5°	6.5	6.5	6.5	6.5	6.5
80°	5.2	5.2	3.9	3.9	3.9

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Scaled Data Report



(END OF REPORT)